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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/586,064	07/14/2006	Yasuzo Tanaka	4447	3260
7590 Floyd B. Carothers CAROTHERS AND CAROTHERS Suite 200 445 Fort Pitt Blvd. Pittsburgh, PA 15219				
			EXAMINER HEALY, BRIAN	
			ART UNIT 2883	PAPER NUMBER
			MAIL DATE 07/14/2009	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/586,064

**Applicant(s)**

TANAKA ET AL.

**Examiner**

BRIAN M. HEALY

**Art Unit**

2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10 and 11 is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☒ Claim(s) 5-9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/ISD)
- Paper No(s)/Mail Date 20061107

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date: \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

**DETAILED ACTION**

***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Allowable Subject Matter***

2. Claims 5-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The closest prior art of record, i.e. Kim et. al., U.S. Patent Application Publication No. U.S. 2003/0214620A1. is discussed below. This reference, either taken singly or in combination with other references fails to teach or suggest steps of testing whether there are abnormal nozzles; a second step of jetting ink from normal nozzles corresponding to spacer forming positions and a third step of shifting lateral position of the nozzles so that normal nozzles could be used where positions corresponded to abnormal nozzles. These limitations are recited in claims 5, Dependent claims 6-9 are inclusive of the limitations of claim 5 as well as reciting other additionally recited limitations. See the dependent claims for a text of these additionally recited limitations.
3. Claims 10 and 11 are allowed.
4. . The closest prior art of record, i.e. Kim et. al., U.S. Patent Application Publication No. U.S. 2003/0214620A1. is discussed below. This reference, either taken singly or in combination with other references fails to teach or suggest steps of testing whether there are abnormal nozzles; a second step of jetting ink from normal nozzles

corresponding to spacer forming positions and a third step of shifting using a control means the lateral position of the nozzles so that normal nozzles could be used where positions corresponded to abnormal nozzles. These limitations are recited in method claim 10 and apparatus claim 11

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Kim et. al., U.S. Patent Application Publication No. U.S. 2003/0214620A1.

7. Kim et. al., U.S. Patent Application Publication No. U.S. 2003/0214620A1 teaches (Figs.1-11B) a liquid crystal manufacturing device and method of using same comprising: an ink jet nozzle 60 capable of producing a granular spacer 90 by jetting and UV curing the spacer 90 on to a substrate 94,94 (Note while a single substrate is shown the spacers can be used in plural fashion on plural opposed substrates corresponding to spacer forming positions which are used in forming a liquid crystal display and also a plurality of ink jet nozzles can be present even though only a single nozzle is shown in the figure) for placing granular spacer drops in a lateral latticed fashion in pixel/non-pixel areas, which clearly, fully meets Applicant's claimed limitations

8. A copy of PTO-1449 will be included in this office action.

9. The following references are also cited by the Examiner as being pertinent and/or related art: Kim et. al., U.S.P. No. 7,102,722 (Figs.1-11B), Niiya, U.S. Patent Application Publication No. U.S. 2009/0009709A1 (Figs.1-17), Kim et. al., U.S. Patent Application Publication No. U.S. 2003/0210311A1 (Figs.1-6) and Sohn et. al., U.S. Patent Application Publication No. U.S. 2003/0076457A1 (Figs.1-10).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRIAN M. HEALY whose telephone number is (571)272-2347. The examiner can normally be reached on M-F 6AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on (571)272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**/BRIAN M. HEALY/  
Primary Examiner  
Art Unit 2883**

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